

# Enterprise GIS The Spatial Data Platform

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## Agenda

- GIS is a platform
- GIS Platform and Component
- Conclusion





## **GIS: Fundamental**

Spatial Data

GPS Remote sensing

Global Positioning System GPS

GIS What is G/8?

Geographic Information System

Global Positioning System

Global Positioning System

Global Positioning System

Geographic Information System

Geographic Information System

Geographic Information System

Global Positioning System

What is G/8?

What is G/8?

Geographic Information System

Geographic Information System

What is G/8?

What is G/8?

What is G/8?

What is G/8?

Geographic Information System

Fig. Clobal Positioning System

Vector Data GIS What is G/8?

Global Positioning System

Fig. Clobal Positioning System

Fig.

GIS is a SYSTEM of computer software, hardware, data and personal to help manipulate, analyze and present information that is tied to a spatial location

GIS = Geographic Information System / Service





## **GIS Stores Data as Layers**

**Utilities** 

**Buildings** 

Roads

Hydrology

Topography

Landuse



**REAL WORLD** 







## **GIS Is a Platform**

Integrating Software and Services

#### Enterprise

#### Desktop



#### Individuals

- Ad Hoc Projects
- Analysis/Modeling
- Mapping
- Professional User

#### Server



#### Workgroups

- Shared Database
- Fixed Applications
- Transactions

#### **Federated**



#### Organizations

- Shared Services
- Integration
- Collaboration

#### Pervasive







## **GIS: Fundamental Layers**



Fundamental Layers

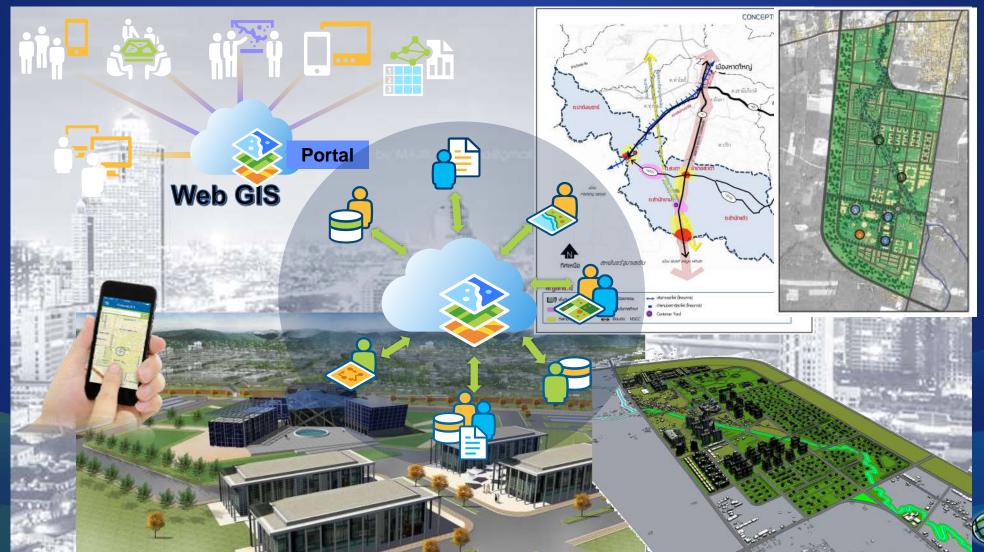
- Administrative boundaries
- Transportation
- Hydrology
- Buildings
- Land Parcels
- Forest Boundaries
- Land use (urban, rural)

- Digital Elevation Model (DEM)
- Ortho Photo Map
- Aerial Photographs
- Satellite Imagery
- Geodetic Contról
- Topographic Maps





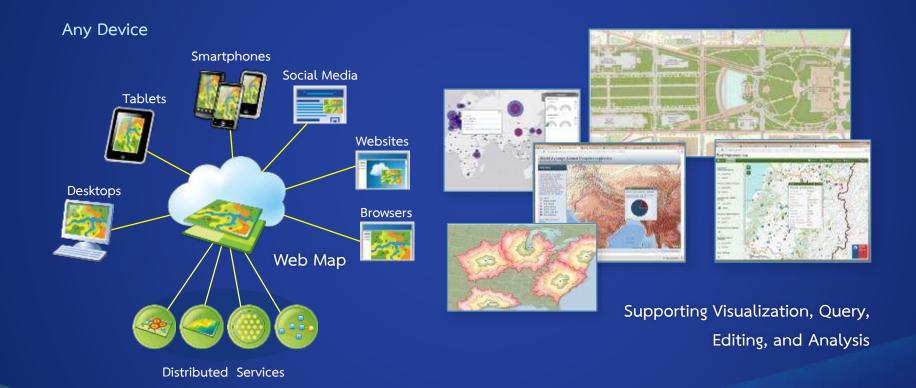
## **GIS** is the Platform for Sharing





## Web Maps Are Fundamental

Providing a New Medium for Organizing and Publishing







## **GIS Platform**

Provides Geospatial Capabilities Across the Entire Organization

#### **Managers**

#### **Citizens**

Knowledge Workers



Web GIS



Developer Users



**Enterprise Integration** 



Portal



Mapping

**Professional** 

GIS

Analysis

Visualization

**Enterprise GIS** 





## GIS is a "Platform of Record, Manage, Collaborate, and Engage"

Organizing and managing the geographic context of your assets and resources







## **Empower Everyone**

To discover, use, make, and share maps from any device, anywhere, anytime









one corporate system

no user limitations

3-clicks or less

uniformity in all their maps

as easy to use as their SmartPhone

► GIS for your organization means...

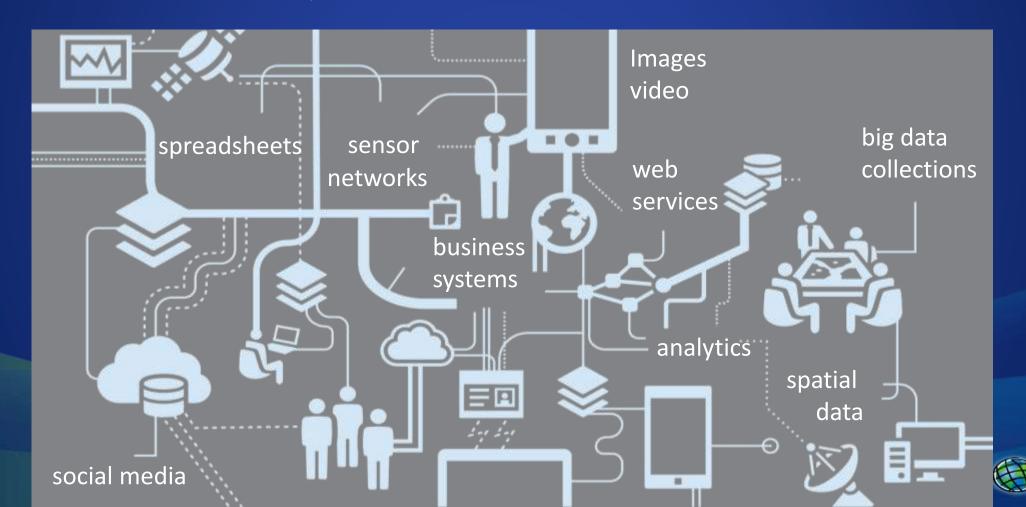






## **GIS at Work**

Integrate, display, analyze, and enrich information from many sources





## **Working Together in Exciting Ways**

To serve our users and enable everyone to do amazing things with geography and GIS

- Use GIS as the system of record for managing assets and resources.
- Create and register web maps and layers (useful information products) in portals.
- Get every employee and contractor to discover, use, make, and share maps...
- Embrace and leverage unique GIS identities for every person accessing the platform.

- Deliver immediate value by configuring first, and customizing second.
- Integrate GIS with other systems – emphasize bringing data into ArcGIS – not just putting maps into other systems.
- Ensure customer success by kick-starting initial operating capability, providing ongoing guidance, and long term support.







## An Integrated Web GIS Platform

Providing mapping, analysis, data management, and collaboration







## **NSDI:** a Framework for Sharing Spatial Data

#### Standard

• Metadata, FGDS, SOP

### Technology

 Portal, Map Service, Web GIS, Internet

#### **Policies**

• Legal, Budget, Implementation

#### Organization

Executive, Team, FGDS
 Custodian, Capacity Building











## **Primary NSDI**







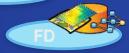
- Buildings
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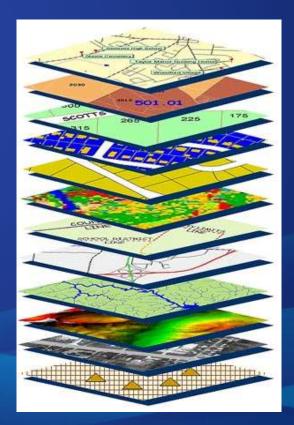
















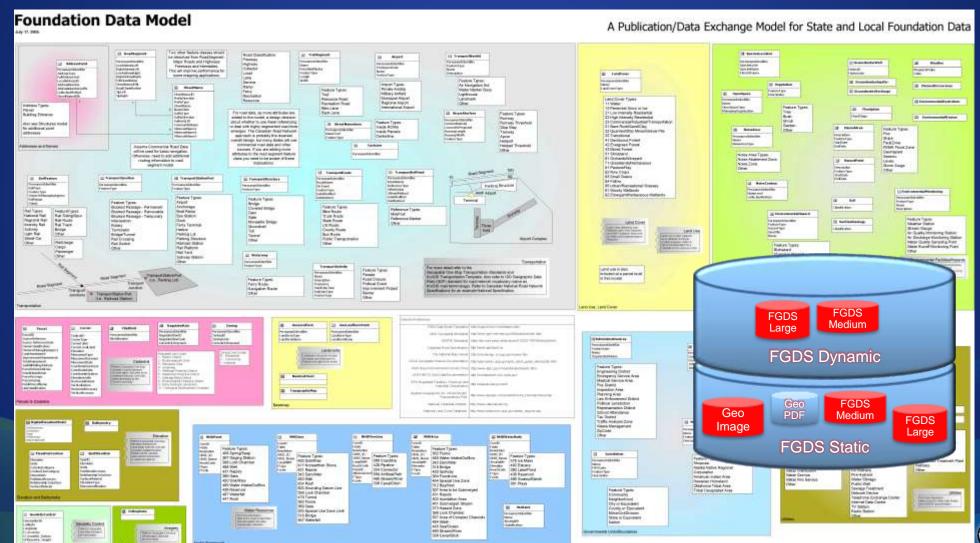
## **National Map Scale and Accuracy**

Map Scale 1:xxxx	Allowable Error at Map Scale(mm)			Allowable Error at ground scale(mm)			Limiting RMSE for CE90(Meter)			Limiting RMSE for CE95(Meter)		
				0.5	0.25	0.2	0.5	0.25	0.2	0.5	0.25	0.2
4,000	0.50 0	.25	0.20	2,000.00	1,000.00	800.00	1.32	0.66	0.53	1.16	0.58	0.46
5,000	0.50 0	.25	0.20	2,500.00	1,250.00	1,000.00	1.65	0.82	0.66	1.44	0.72	0.58
10,000	0.50 0.	.25	0.20	5,000.00	2,500.00	2,000.00	3.29	1.65	1.32	2.89	1.44	1.16
15,000	0.50 0.	.25	0.20	7,500.00	3,750.00	3,000.00	4.94	2.47	1.98	4.33	2.17	1.73
25,000	0.50 0	.25	0.20	12,500.00	6,250.00	5,000.00	8.24	4.12	3.29	7.22	3.61	2.89
50,000	0.50 0.	.25	0.20	25,000.00	12,500.00	10,000.00	16.47	8.24	6.59	14.44	7.22	5.78





## Standard Layers and Data Model







## Why NSDI Now for Nation?

- Many Strengths
  - PM and high authority government aware of the importance of GIS; good support, promotion
  - Designated organization in charge of standards development (National GIS Committee, Industrial Standards Institute)
  - Existing, large national investment in geospatial data, including FGDS components
  - Government organizations encouraged to share data
  - Decent ICT infrastructure
- Support e-government policy
- NSDI helps build the National Information Infrastructure required for a knowledgebased society



## Why NSDI Now for Nation?

- Current Issues for which NSDI could provide a solution
  - FGDS data scattered, not standardized, cannot optimize its use
  - Redundant data collection
  - No formal policy on issues such as data sharing, price, copyright
  - Limited use of standards, no policy on use of standards
  - Very little metadata, just beginning collection





## **Benefits of an NSDI for Nation?**

- Elimination of redundant GIS data collection and management within Nation
- Better interoperability and data sharing through the establishment of data content and metadata standards
- Improved decision-making through spatial analysis
- Improved citizen services
- Reduced costs





## **Thailand NSDI**

http://thaisdi.gistda.or.th/en/



Download

NATIONAL GEOSPATIAL CATALOGUE

DOWNLOAD

WEB LINK

CONTACT US

Add a search







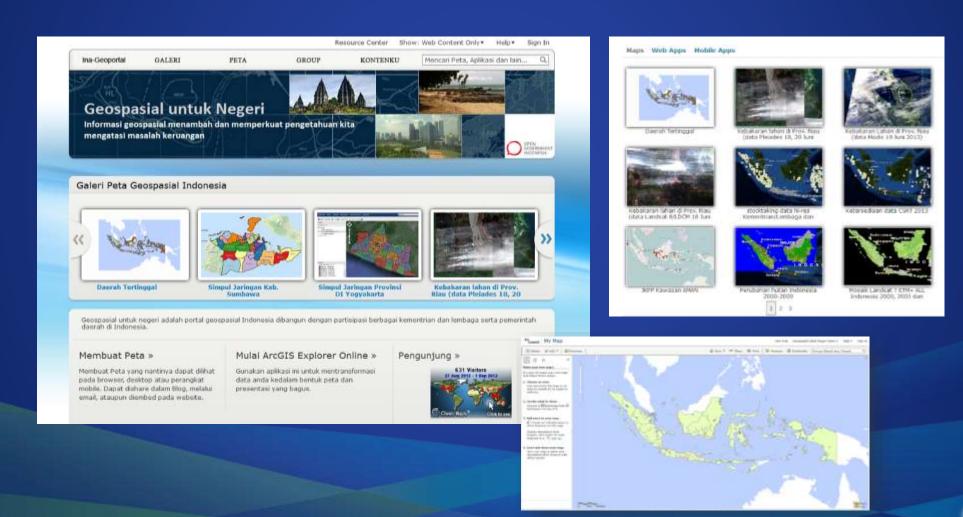






## **Indonesia NSDI**

http://tanahair.indonesia.go.id/home/







## **Bhutan NSDI**

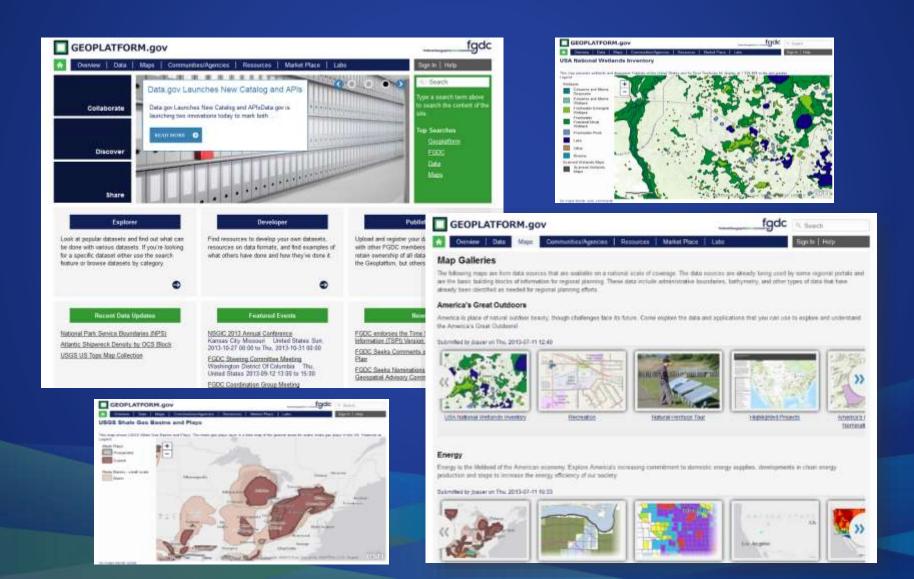






## Geoplatform.gov

http://www.geoplatform.gov/home







## **Eye on Earth**

http://www.eyeonearth.org/









## **United Nations Environment Program**

https://www.uneplive.org/uneplive/catalog/main/home.page

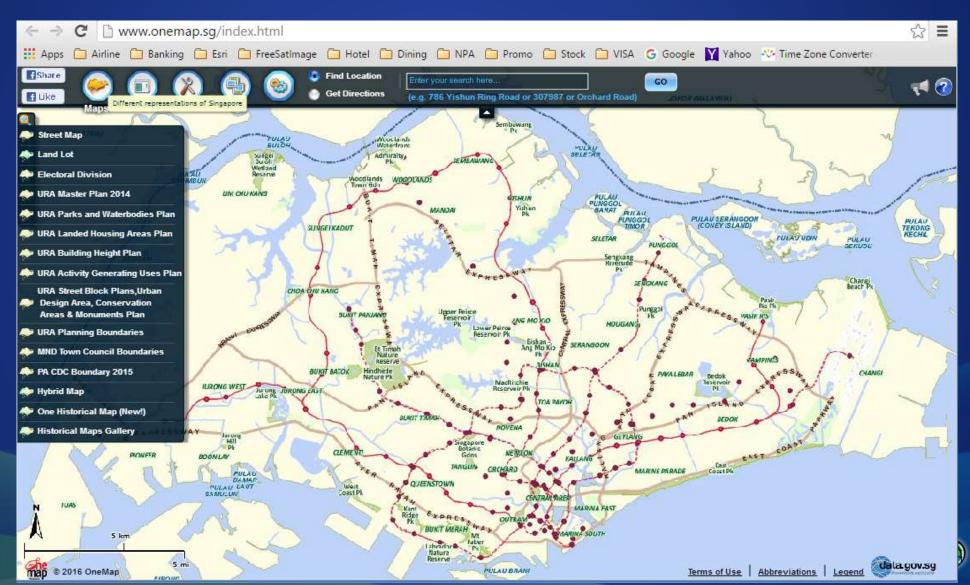






## Singapore One Map

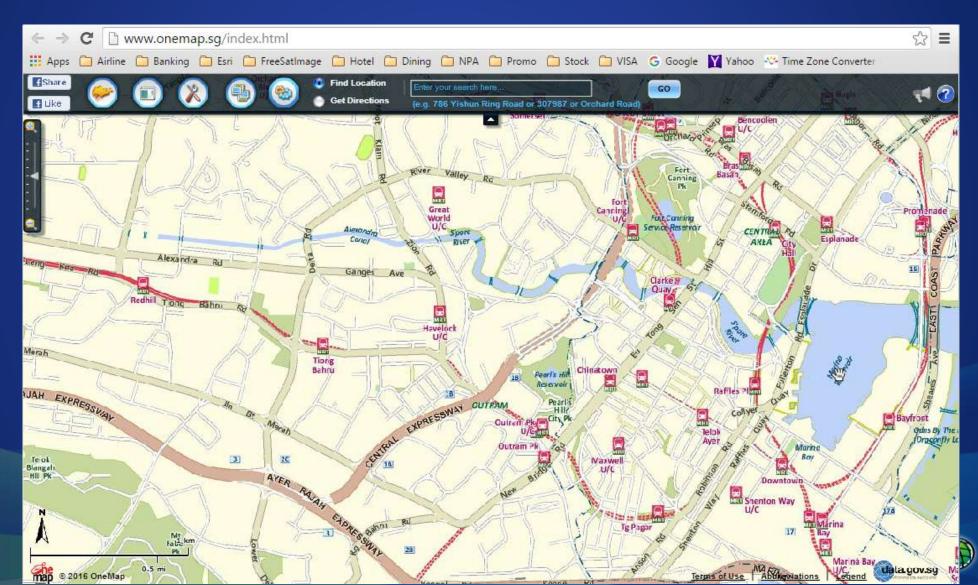
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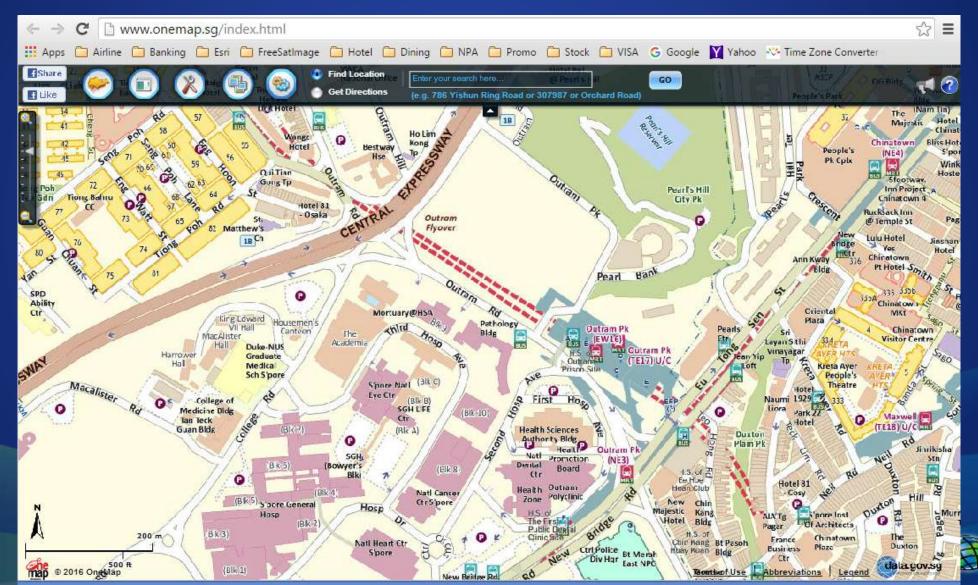
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## Singapore One Map

http://www.onemap.sg/index.html





## Conclusion





## **GIS Platform**

- Gather, Search, and Display Gallery for Maps, Apps, and Services
- Collabolate and Mash up all Feature Services
- Full user and client management
- Security with SSI, Active Directory or LDAP







## **GIS Platform**

## Ready

- Ready-to-use software
- Quick install and configuration time

#### **Easy**

- Easy to use
- Suitable for everyone in organization

#### **Flexible**

- Flexible
- Integration with Enterprise systems

















## Thank you

